

represented discomfort. If now I curve the line to the right as the humidities increase, I find that with a temperature of 60° and a humidity of 80° and a 5-mile wind I am also comfortable. If I prolong the line further, it reaches the point where the temperature is 80° and the humidity nearly 100°, but here I am again uncomfortable, with a feeling of suffocation. In this way I try my way around over the diagram until I have drawn a curve, a sort of parabolic curve, connecting all the temperatures and humidities that produce a feeling of perfect comfort when a 5-mile wind is blowing. A similar curve may be drawn for a 1-mile wind. There is almost no curve for absolute calm. A 20 or 30 mile curve of comfort is confined to that region of the chart where the relative humidity is quite high.

A series of curves like this give one a clearer view of the relation between our sensations and the atmospheric conditions than any other method that I know of. It does not answer the query, how shall I compute the sensible temperature, but it does better than this in that it enables each person to make for himself his own personal diagram of what may be called sensible temperature curves. He may, for instance, draw one curve for extremely raw cold sensations, another for suffocating hot, another for stimulating or irritating dry sensations. A series of curves like these for various parts of our country and for persons of very different temperaments will constitute a most important contribution toward the eventual discovery of a method of computing and predicting the sensations of temperature, which, as is readily seen, is not temperature at all, but a nervous sensation of very complex origin.

SENSATIONAL METEORIC STORY.

In a New York paper of September 10 there appeared a remarkable story of a meteoric shower at Mill River, Jamaica, which was said to have occurred on August 30. On calling the attention of Mr. Maxwell Hall to this matter, he, as government meteorologist for Jamaica, replies as follows:

In the Gleaner (a Jamaica newspaper) of the 31st of August there was an account, given by a lady, of a supposed meteoric fall at her house on the 20th of August.

I wrote her September 1, but did not receive a reply until the 13th. The whole thing was a mistake; lightning struck a tree close to her house with an explosive effect; it may have been "ball" lightning. She wrote me that the little stones noticed at first are to be found all through the district; and they seem to me to be very small waterworn pebbles. I have, however, taken steps to have them analyzed.

The account given in the New York paper is shamefully exaggerated.

It would seem that the sensational dispatch from Kingston to the New York paper was intended especially to tickle the palate of the American reader. We are so accustomed to wonders in these days of great human inventions, we hear so much about the multimillionaire syndicates, the latest wonders in electricity, the fastest ships, and the wonderful guns, that the active newspaper correspondents have determined that nature shall not be outdone by man and have undertaken to assist her to perform miracles. They rarely describe any ordinary meteorological phenomenon without exaggerating it to such an extent and incorporating so much of the products of their own vivid imagination that one scarcely recognizes the kernel of truth in the mass of verbiage.

INCREASE AND DECREASE OF FRESH WATER LAKES.

The Editor has lately received a letter inquiring what are the recognized years in which lakes attain their maximum and their minimum extent. This query sounded at first as though there might be in some part of our country a recognized periodic increase and decrease of the lakes. Fluctuations of some kind undoubtedly occur everywhere throughout

the world and depend upon the balance between accumulated rainfall and accumulated evaporation. There is no reason for a regular or chronological periodicity. It can hardly be said that periodic fluctuations in rainfall alone would have anything like corresponding fluctuations in the height of water in large lakes, although this might be the case for small ponds. Many years ago the Editor made a calculation based on the best data accessible to him, showing that the annual fluctuation in the level of the water in Yellowstone Lake exactly followed the accumulated sum of the rainfall minus the evaporation. In this calculation he was much impressed with the uniformity of the outflow from this, and in fact from every large lake. A large change in the height of the lake level produces only a small change in the rate of outflow, so that months and even years may be required to counterbalance the influence of a special rainy season. In Europe some attempts have been made to connect fluctuations of lakes with the rainfall, but no periodicity that has been deduced for that part of the world can be said to hold good for America. In this country too many important changes are being made by human agencies to enable us to make any simple connection between the meteorological phenomena and the levels of the smaller lakes. For instance, in California, according to a newspaper paragraph, extracted from The Hanford Sentinel, Lake Tulare, which should have an area of at least three hundred square miles, is now as "dry as a chip." It is true that this statement is made by the Sentinel on the authority of one person, Mr. W. P. McCord, an old farmer of this region, and the Sentinel adds that:

The reclamation of lake lands has been regularly noted in the columns of this paper for years, but this season has witnessed the most extensive spread of the interests of the husbandman. At the mouths of Cross Creek and Tule River reclamation ditches and levees have been thrown up so that the water that may come with a wet season will be taken care of and an immense area of rich soil irrigated.

It is useless to attempt a meteorological or natural explanation of phenomena such as this, which are mainly due to the artificial conditions of civilization.

NOT BALL LIGHTNING.

The Pensacola Daily News of August 17 publishes the following paragraph on the authority of Mr. Ross E. Pollock:

Last evening at 8:42 a very luminous object made its appearance in the northeast and moved slowly toward the east, being visible for about two seconds, then disappeared. At the expiration of five seconds a tremendous explosion occurred like that of a big gun.

This interesting item appears as "a meteor." as it properly should, in the regular monthly journal of the Weather Bureau observer at Pensacola, Mr. A. B. Crane; but it is enlarged upon in the Pensacola Daily News by Mr. Pollock, who is a map distributor and not a regular observer, and is spoken of by Mr. Pollock as "probably ball lightning," which it certainly was not. It was an aerolite or small solid substance shooting from the outside interstellar space into the earth's atmosphere and made visible by the heat thus generated. It was seen at places many miles apart, and the lines of sight probably all converged toward a region 50 or 100 miles above the surface of the earth, where this body rapidly pursued its path until it was burned up. The noise, or so-called explosion, of these aerolites appears to be generated in a manner similar to that of the snapping of a whip or the striking together of two hard substances. It may be called an explosive noise, but there is no explosion, properly so called.

On the other hand, ball lightning is always near the ground; the so-called ball seems to roll along the surface of the ground or of some object near the ground, pursuing an irregular course, and eventually bursts with a noise like a pistol. It has never been observed at a greater distance than